

Appendix D

Tobamovirus Movement Protein

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<u>SHMV</u>	SKIST--LLAPEKFVKLSVSDKFKWKAPSVCIVQSDTISM	TANGR-SL
<u>CGMMV</u>	SKVSVENSLKPEKFVKISWVDKLLPNYFSILKYL	SITDFSVVKAQSYESL
<u>CGMMV-W</u>	SKVSVENSLKPEKFVKISWVDKLLPNYFSILKYL	SITDFSVVKAQSYESL
<u>C-CGMMV</u>	SSVGVKNVLPKNEFVKLSWVDRILPDMFTVYR	YLSVTDYSVIKSKDSECL
<u>CFMMV</u>	SKVGVRNALPKPEEFVKITWVDKLLPDAFTI	LKYLSITDYSVVQSKDYEHL
<u>YCGMMV</u>	SSVGVKNVLPKNEFVKLSWVDRILPDMFTVYR	YLSVTDYSVIKSKDSECL
<u>FPMV</u>	VELKEPKQLKVND	FKMSFADKILPRLTRLRTVS
<u>TMV-CG</u>	????MSYE	PKVSDFLALT
<u>CRMV</u>	????MSYE	PKVSDFLALT
<u>CR-TMV</u>	MSIVSYE	PKVSDFLNL
<u>RMV-SH</u>	MSIVSYE	PKVSDFLNL
<u>TVCV</u>	MSIVSYE	PKVSDFLNL
<u>TMGMV</u>	MAVSLRDTVKI	SEFIDL
<u>TMV-OB</u>	---MSKA	IVKIDEFI
<u>PMMV</u>	MAVVVKDDV	KISEFINL
<u>ORSV</u>	MAI	VLRDSIKISEFINL
<u>TOMV-L</u>	MAVVKGKV	NINEFIDL
<u>TMV-vul</u>	MAVVKGKV	NINEFIDL
<u>TMV-Rak</u>	MAVVKGKV	NINEFIDL

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<u>SHMV30K</u>	FTFDVLKDVLKHA	--EEYTYVDVLGVVLSQWLLPKGT
<u>CGMMV30K</u>	VPVKLLRGV	--DL-TKHL
<u>CGMMV-W</u>	VPVKLLRGV	--DL-TKHL
<u>C-CGMMV</u>	IPVDLLRGV	--DL-SKSKYV
<u>CFMMV</u>	IPVDLLRGV	--DF-SKSKYV
<u>YCGMMV</u>	IPVDLLRGV	--DL-SKSKYV
<u>FPMV</u>	VNLN	ILKGV
<u>TMVCG</u>	CDIDLLNV	--PL-DKYRYVGVLGV
<u>CRMV</u>	CDIDLLNV	--PL-DKYRYVGVLGV
<u>CRTMV</u>	CDIDLLNV	--PL-DKYRYVGILGA
<u>RMV-SH</u>	CDIDLLNV	--PL-DKYRYVGVLGV
<u>TVCV</u>	CDIDLLNV	--PL-DKYRYVGILGA
<u>TMGMVA</u>	30KSDVDLLKG	--KL-VKKGYVCLADLV
<u>TMV OB</u>	SEVDLLKG	--KL-VKNGYVCLV
<u>PMMV</u>	SDVNLLKG	--KL-VKDG
<u>ORSV 30K</u>	SDIDLLKG	--KL-VENGYVCLAGL
<u>TMVL30K</u>	SEVNLLKG	--KL-IEGGYVCLV
<u>TMVOM30K</u>	SEVNLLKG	--KL-IDSGYVCLAGL
<u>TMV-RAK</u>	SEVNLLKG	--KL-IDSGYVCLAGL

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<u>SHMV30K</u>	-KGKASVLA	VNCRAATQE
<u>CGMMV30K</u>	HSV	AEGTICKFS
<u>CGMMV-W</u>	HSV	AEGTICKFS
<u>C-CGMMV</u>	SMVDEGTICKFS	VAASTRDFMV
<u>CFMMV</u>	SLVSEG	TICKFSVAAASRDF
<u>YCGMMV</u>	SMVDEGTICKFS	VAASTRDFMV
<u>FPMV</u>	KGF	NGLVAEFKTR
<u>TMVCG</u>	ENS	KECII
<u>CRMV</u>	ENS	KECII
<u>CRTMV</u>	ANS	KECVIGTY
<u>RMV-SH</u>	ENS	RESMIGTY
<u>TVCV</u>	VNS	KECVIGTY
<u>TMGMVA</u>	30KKRS	KEATLGAYHAPACK
<u>TMV OB</u>	QRHNEATLG	SYTTKASK

PMMV	QRDDEATLGSYRTSAAKKRFAKLIPNYSITTADAERKVWQVLVNIRGVA
ORSV 30K	KRANEATLGSYHTSACKRFTFKIIPNYSVTTADALKGIWQVMTNIRGVE
TMVL30K	ERADEATLGSYYTAAAKKRFQFKVVPNYGITTDAEKNIWQVLVNICKNVK
TMVOM30K	ERADEATLGSYYTAAAKKRFQFKVVPNYAITTQDAMKNVWQVLVNIRNVK
TMV-RAK	ERADEATLGSYYTAAAKKRFQFKVVPNYAITTQDAMKNVWQVLVNIRNVK

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SHMV30K	VKDGFTPPLSVEIACLVQFSNCVITRSLSMKLKE-N--PATRTF---SAEE
CGMMV30K	IKDGFHPLTLEVACLVATTNSIIKKGLRASVVE-SVVSDDQSI---VLDS
CGMMV-W	IKDGFHPLTLEVACLVATTNSIIKKGLRASVVE-SVVSDDQSI---VLDS
C-CGMMV	IKEGFSPLTLEIASLVAATTNSILKKGLRVSVLE-SVVGSDASI---NLDT
CFMMV	IKDGFSPPLTLEIASLVAATTNSILKKGLRVSVIE-SVVGSDASV---SLDT
YCGMMV	IKEGFSPLTLEIASLVAATTNSILKKGLRVSVLE-SVVGSDASI---NLDT
FPMV	IEDGYYPLAIEIATLVEQSRTIINHGLRATILKRCDDISDLELPSADLDE
TMVCG	IEAGWQPLALEVVSVAMVTNNVVVKGLREKVIA-VNDPNVEGF-EGVVDD
CRMV	IEAGWQPLALEVVSVAMVTNNVVVKGLREKVIA-VNDPNVEGF-EGVVDD
CRTMV	IEAGWQPLALEVVSVAMVTNNVVVMKGLREKVVA-INDPDVEGF-EGVVDE
RMV-SH	IEAGWQPLALEVVSVAMVTNNVVVKGLREKVIA-VNDPNVEGF-EGVVDD
TCV	IEAGWQPLALEVVSVAMVTNNVVMKGLREKVVA-INDPDVEGF-EGVVDE
TMGMVA 30K	MEEGYCPLSLEFVSVICVVHKNNVRKGLRERILS-VTDGSPIELTEKVVEE
TMV OB	MSEGWCPLSLEFVSVCIVHKNNVRKGLREKVTA-VSEDDAIELTEEVVDE
PMMV	MEKGFCPPLSLEFVSVCIVHKSNIKLGRLREKITS-VSEGGPVELTEAVVDE
ORSV 30K	MEKGFCPLSLEFVSVICVVYLNNIKLGRLREKILN-VTEGGPTELTEAVVDE
TMVL30K	MSAGYCPLSLEFVSVCIVYKNNIKLGRLREKVTS-VNDGGPMELSEEVVDE
TMVOM30K	MSAGFCPLSLEFVSVCIVYRNNIKLGRLREKITN-VRDGGPMELTEEVVDE
TMV-RAK	MSAGFCPLSLEFVSVCIVYRNNIKIGLREKITN-VRDGGPMELTEEVVDE

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SHMV30K	VDELLGSMTTLRSIEGLRKKKEP
CGMMV30K	LSEKVEPFFDKVPISAAMARDP
CGMMV-W	LSEKVEPFFDKVPISAAMARDP
C-CGMMV	VSDKVQPFFDSVPITAAVIARDR
CFMMV	LSEKVQPFFDSVPITASVSRDR
YCGMMV	VSDKVQPFFDSVPITAAVIARDR
FPMV	SIELVSNNSNIVSKRTHKKGKKR
TMVCG	FVDSVAAFKAVDTFRKKKKRIGG
CRMV	FVDSVAAFKAIDSFRKKKKRIGG
CRTMV	FVDSVAAFKAVDNFKRKKKKVEE
RMV-SH	FVDSVAAFKAIDSFRKKKKKIGG
TCV	FVDSVAAFKAVDNFRKRKKKVEE
TMGMVA 30K	FVDPVDEVPMAVKLEKVPENKEMVG
TMV OB	FIEAVPMARRLQNLRKPKYNKEK
PMMV	FIESVPMADRLRKFRNQSKKGSN
ORSV 30K	FVEKVPMAARLKSFRSVNKKPS
TMVL30K	FMENVPMSVRLAKFRTKSSKRGP
TMVOM30K	FMEDVPMSIRLAKFRSRTGKKSD
TMV-RAK	FMEDVPMSIRLAKFRSRTGKKSV

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